

**WHAT IS CLAIMED IS:**

1. Remedy for the reduction or suppression of the sensation of pain in higher animals, especially human beings, containing - with the exclusion of cells or cell lysates- expression constructs containing the POMC-sequence deleted of the coding regions for adrenocorticotrophic hormone (ACTH) and beta-melanocyte stimulating hormone ( $\beta$ -MSH), which encode at least once for  $\beta\beta$ -endorphin.
2. Remedy according to claim 1, wherein one single expression construct encodes for one, two or three  $\beta$ -Endorphin.
3. Remedy according to claim 1 or 2, which contains additionally an expression construct coding for corticotropin-releasing-factor (CRF).
4. Remedy according to claim 1, where the  $\beta$ expression construct is a plasmid or a linear, covalently closed expression construct.
5. Remedy according to claim 4, which is applicable by injection.
6. Remedy according to claim 4, where the DNA is complexed by polyethylenimine (PEI).
7. Remedy according to claim 4, where the linear, covalently closed expression construct is modified with a peptide.
8. Remedy according to claim 7, where the linear, covalently closed expression construct is modified with a peptide comprising the nuclear localization sequence (NLS) of the large T-antigen of SV40.
9. Remedy according to claim 8, where the NLS peptide contains the amino

acid sequence PKKKRKVEDPYC.

10. Remedy according to claim 4, where the linear, covalently closed expression construct is conjugated to a cationic peptide of between 8 and 20 amino acids in length.

11. Vector for the production of an expression construct as a component of a remedy, containing the POMC-sequence deleted of the coding regions for adrenocorticotrophic hormone (ACTH) and beta-melanocyte stimulating hormone ( $\beta\beta$ -MSH), which encodes once for  $\beta\beta$ -endorphin.  $\beta\beta$

12. Vector for the production of an expression construct as a component of a remedy, containing the POMC-sequence deleted of the coding regions for adrenocorticotrophic hormone (ACTH) and beta-melanocyte stimulating hormone ( $\beta$ -MSH), which encodes at least twice for  $\beta$ -endorphin.  $\beta\beta\beta$

13. Vector for the production of an expression construct as a component of a remedy, containing the POMC-sequence deleted of the coding regions for adrenocorticotrophic hormone (ACTH) and beta-melanocyte stimulating hormone ( $\beta$ -MSH), which encodes three times for  $\beta$ -endorphin.  $\beta\beta\beta$

14. Vector for the production of an expression construct as a component of a remedy, containing the desoxynucleic acid sequence of corticotropin releasing factor (CRF) (pMOK-CRF: Seq. ID 6). $\beta\beta\beta$

15. Desoxyribonucleic acid sequence, containing one of the sequence tracts encoding  $\beta$ -endorphin from the pro-opiomelanocotrin gene (POMC), specifically the

sequence shown in Seq. ID 1 (rPOMC 1x $\beta$ -END).

16. Desoxyribonucleic acid sequence, containing two of the sequence tracts encoding  $\beta$ -endorphin from the pro-opiomelanocotrin gene (POMC), specifically the sequence shown in Seq. ID 7 (rPOMC  $\beta$ 2x $\beta$ -END).

17. Desoxyribonucleic acid sequence, containing three of the sequence tracts encoding  $\beta$ -endorphin from the pro-opiomelanocotrin gene (POMC), specifically the sequence shown in Seq. ID 2 (rPOMC 3x $\beta$ -END).